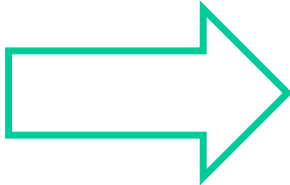

SIG on “Energy-Harvesting Cognitive Radio Networks”

Presentation at IEEE GLOBECOM 2018

Outline

- Introduction
- Chair, Vice-Chairs, and Senior Advisors
- Founding Members
- Current Activities (Year 2018)
- Next Activities (Year 2019)

Introduction

- This SIG was created at the beginning of this year (2018).
 - Cognitive Radio + Energy Harvesting:
 - Cognitive Radio:
 - Spectrum scarcity
 - Energy Harvesting:
 - Energy efficiency
- 
- Spectrum and energy-efficient communications systems*
- This SIG aims to sponsor and promote technical publications, workshops, tutorials, journal special issues, student activities, and other related activities in the areas relevant to energy-harvesting cognitive radio networks (EHCRNs).

Team

Chair:

- Daniel Benevides da Costa, Federal University of Ceará (UFC), Brazil.

Vice-Chairs:

- Octavia Dobre, Memorial University, Canada
- Trung Q. Duong, Queen's University Belfast, UK
- Minghua Xia, Sun Yat-sen University, China
- Phee Lep Yeoh, University of Sydney, Australia

Senior Advisors:

- Mohamed Slim-Alouini, KAUST, Saudi Arabia
- George K. Karagiannidis, Aristotle University of Thessaloniki, Greece
- Arumugam Nallanathan, Queen Mary University of London, UK

Founding Members

Founding Members:

- Prabhat K. Upadhyay, India Institute of Technology (IIT) Indore, India.
- Georges Kaddoum, École de Technologie Supérieure (ETS), Canada
- Nan Yang, Australia National University, Australia
- Jules Moualeu, University of the Witwatersrand, South Africa
- Marco Di Renzo, CNRS, France
- Alexandros-Apostolos A. Boulogeorgos, Aristotle University of Thessaloniki, Greece
- Haiyang Ding, Xidian University, China
- Ugo Silva Dias, University of Brasília, Brazil
- Zhiguo Ding, Lancaster University, UK
- Petros Bithas, University of Pirineus, Greece
- Athanasios G. Kanatas, University of Pirineus, Greece
- Mustapha Benjillali, INPT, Morocco

Current Activities (Year 2018)

1) Special Issue on “Energy-Harvesting Cognitive Radio Networks”

- IEEE Transactions on Cognitive Communications and Networking
- Guest Editors:
 - Daniel Benevides da Costa (Lead)
 - George G. Karagiannidis
 - Haiyang Ding
 - Minghua Xia
 - Octavia Dobre
 - Prabhat K. Upadhyay
 - Robert Schober

Current Activities (Year 2018)

- **19 submitted papers (Good Number of Submissions)**
 - 1 paper accepted with Minor Revisions
 - 1 paper rejected by EiC – Out of Scope
 - 1 paper withdrawn
 - 16 papers Under Review
- The remaining decisions will be sent very soon.
- Acceptance rate should be around **40%**.
- Expected publication: first semester, 2019.

Current Activities (Year 2018)

2) IEEE PIMRC 2018: 1st Workshop on Energy Harvesting Communication Networks

- Workshop Organizers:
 - Daniel Benevides da Costa (Lead)
 - Himal A. Suraweera
 - Derrick Wing Kwan Ng
 - Minghua Xia
 - Prabhat K. Upadhyay
 - Haiyang Ding
 - Bruno Clerckx
- $\frac{3}{4}$ -day workshop
 - 1 Technical Session, 2 Keynote Speakers, 1 Panel Session

Current Activities (Year 2018)

W-K 1st Workshop on Energy Harvesting Communication Networks

Time	EDAS Number	Title	Authors with Affiliations
9.00			
9:00-9:22	1570460059	Time Reversal Scheme Using Multiple Transmit Antennas for SWIPT in Indoor Channel	Hongsun An and Hyuncheol Park (KAIST, Korea)
9.23-9.45	1570459781	Exploitation of Time Modulated Arrays for Multisine Power Transmission	Francesco Mani (Università degli studi di Bologna, Italy); Diego Masotti (University of Bologna, Italy); Alessandra Costanzo (DEI, University of Bologna, Italy)
9.46-10.08	1570463000	Hybrid Satellite-Terrestrial Spectrum Sharing Systems with RF Energy Harvesting	Vibhum Singh and Prabhat Kumar Upadhyay (Indian Institute of Technology Indore, India); Daniel Benevides da Costa (Federal University of Ceara (UFC) & Area: Telecommunications, Brazil); Ugo Dias (University of Brasilia, Brazil)
9.09-10.30	1570463308	Positive Impact of Interference on RF Energy Harvesting for IoT Devices	Sandy Saab (Notre Dame University, Lebanon); Nour Kouzayha, Joseph Costantine and Zaher Dawy (American University of Beirut, Lebanon)
10.30 - 11.00: coffee			
11:00-11:45	Keynote	Wirelessly Powered Sensing: Backscatter, Learning, and Computing	Kaibin Huang, The University of Hong Kong
11:46-12:30	Panel	Recent Advances and Challenges on Energy Harvesting Circuit and Communication Systems Design	Moderator: Daniel Benevides da Costa - Federal University of Ceará (UFC), Brazil. Panelists: Deniz Gunduz - Imperial College London, UK, Subhrakanti Dey - Uppsala University, Sweden, Alessandra Costanzo - University of Bologna, Italy
12.30 - 14.00: lunch			
14.00-14.45	Keynote	Signal and System Designs for Wireless Information and Power Transfer: From Theory to Prototyping and Experimentation	Bruno Clerckx; Imperial College London, UK

Next Activities

- Propose a Special Issue in IEEE Access (first semester of 2019)
- Propose the 2nd Workshop on “Energy Harvesting Communication Networks”, IEEE PIMRC 2019.

*Thank you for your
attention!!*